

Title (en)

A smooth gray component replacement strategy that utilizes the full device gamut

Title (de)

Strategie zur glatten Ersetzung von Grauantteilen unter Ausnützung der gesamten Geräte-Farbpalette

Title (fr)

Stratégie de lissage du remplacement des composantes de gris, qui utilise l'intégralité de la gamme de couleur de l'appareil

Publication

**EP 1441505 A2 20040728 (EN)**

Application

**EP 04000653 A 20040114**

Priority

US 34235503 A 20030115

Abstract (en)

Systems and methods are disclosed of a smooth gray component replacement strategy which utilizes the full gamut of a printer device. A CMY to CMYK gray component replacement transform is disclosed which inherently exploits the full gamut of the printer, by transforming points in CMY cube to L\*a\*b\* color space, scaling the obtained values so they fill the maximum gamut obtainable with the printer device and calculating the CMYK values needed to obtain the scaled L\*a\*b\* values. The CMY to CMYK transform is then smoothed with an averaging filter that does not change CMYK values at the comers. The entire color gamut is adequately sampled and small changes in CMY do not produce large jumps in L\*a\*b\*.

<IMAGE>

IPC 1-7

**H04N 1/60**

IPC 8 full level

**B41J 2/525** (2006.01); **G06T 1/00** (2006.01); **H04N 1/46** (2006.01); **H04N 1/60** (2006.01)

CPC (source: EP US)

**G06K 15/00** (2013.01 - US); **H04N 1/6025** (2013.01 - EP US); **H04N 1/6058** (2013.01 - EP US)

Citation (examination)

- US 2002113982 A1 20020822 - CHANG JAMES Z [US], et al
- US 5508827 A 19960416 - PO-CHIEH HUNG [JP]

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CN110435314A; US10681248B2; WO2007137621A1

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**EP 1441505 A2 20040728**; **EP 1441505 A3 20051123**; JP 2004222279 A 20040805; US 2004136014 A1 20040715; US 7411696 B2 20080812

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